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SAN FRANCISCO BAY REGION
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FACT SHEET
for

NPDES PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR

POTRERO POWER PLANT
MIRANT POTRERO, LLC.
SAN FRANCISCO COUNTY

NPDES PERMIT NO. CA0005657
ORDER NO. R2-2006-00XX

PUBLIC NOTICE:

Written Comments

- Interested persons are invited to submit written comments concerning this draft permit.
- Comments must be submitted to the Regional Board no later than 5:00 p.m. on March 20, 2006.
- Send comments to the Attention of Derek Whitworth.

Public Hearing

- The draft permit will be considered for adoption by the Board at a public hearing during the Board's regular monthly meeting at: Elihu Harris State Office Building, 1515 Clay Street, Oakland, CA; 1st floor Auditorium.
- This meeting will be held on: May 10, 2006 starting at 9:00 am.

Additional Information

- For additional information about this matter, interested persons should contact Water Board staff member: Derek Whitworth, Phone: (510) 622-2349; email: dwhitworthe@waterboards.ca.gov

This Fact Sheet contains information regarding a reissuance of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for the Mirant Potrero, LLC Potrero Power Plant for industrial wastewater discharges. The Fact Sheet describes the factual, legal, and methodological basis for the sections addressed in the proposed permit and provides supporting documentation to explain the rationale and assumptions used in deriving the effluent limitations.

I. INTRODUCTION

The Discharger applied for reissuance of waste discharge requirements and a permit to discharge wastewater to waters of the State and the United States. The application and Report of Waste Discharge are dated November 17, 2003.

1. Facility Description

The Discharger owns and operates the Potrero Power Plant, located at 1201-A Illinois Street, San Francisco, San Francisco County, California. The facility was previously owned and operated by the Pacific Gas and Electric Company (PG&E). The Discharger acquired ownership from PG&E on April 19, 1999.

The Potrero Power Plant is a natural gas-fired steam electric generating station with a maximum generating capacity of 206 net megawatts (MW) from the sole generating unit (Unit 3).

Wastewater is discharged to Lower San Francisco Bay via surface outfalls located at the shoreline. Two wastewater outfalls are covered under this Order (Outfalls E-001 and E-006). Outfall E-001, the principal wastewater discharge point for the facility, discharges wastewater composed of non-contact cooling water, intake screen wash water, boiler blowdown, storm water, heat exchanger flushes and thermal demusseling discharges. Up to 226 million gallons per day (mgd) of water are discharged through Outfall E-001.. Outfall E-006 discharges wastewater associated with the operation of the bioassay laboratory. This outfall is used intermittently and the average volume discharged is 0.0071 mgd.

Wastewater discharges via outfalls E-002 and E-004 have been eliminated. The previous Order for Potrero Power Plant covered discharges from Outfalls E-003 and E-005. Both outfalls are composed entirely of stormwater runoff. The Discharger has applied for coverage of Outfalls E-003 and E-005 under the General Permit for Stormwater Discharges (Industrial, NPDES #CAS000001). These two outfalls are not covered by this Order.

The Discharger had proposed to significantly upgrade the facility in concert with the Unit 7 modernization project. In addition to installing a new 540 MW combined-cycle generator, the facility proposed to upgrade the intake structure for Unit 3 by installing more modern technologies to minimize adverse impacts to aquatic life. The outfall, currently located at the shoreline, would be relocated to a submerged offshore location and incorporate diffuser ports to reduce the signature of the thermal plume. As of the adoption of this Order, the Discharger is no longer actively pursuing the Unit 7 modernization project.

2. Process Description

The Discharger's process consists of intake water screening, heat treatments for mussel control, chlorination and dechlorination for biofouling control and best management practices. Dechlorinated effluent from the facility is discharged into Lower San Francisco Bay. Effluent discharged via Outfall E-001 is discharged at shoreline at latitude 37° 45' 23.70" and longitude 122° 22' 48.90". Effluent discharged via Outfall E-006 is discharged at shoreline at latitude 37° 45' 25.80" and longitude 122° 22' 48.80".

The U.S. Environmental Protection Agency (U.S. EPA) and the Board originally classified this Discharger as a minor discharger because the flow is predominately non-contact cooling water (more than 90 percent), contains less than 1 mgd of process wastewater, and the maximum generating capacity is less than 500 MW. However, concerns regarding the impacts of discharges from power plants have prompted the Board to re-classify the Discharger as a major discharger. Impacts from (1) the intake of bay water, (2) the discharge of heated wastewater, and (3) the high volume of discharge are expected to be more of a water quality threat than that of a minor discharger.

3. Receiving Water Beneficial Uses

The receiving waters for the subject discharges are the waters of Lower San Francisco Bay. The beneficial uses for Lower San Francisco Bay, as identified in the Regional Board's June 21, 1995 Water Quality Control Plan San Francisco Bay Basin (Region 2) (the Basin Plan) and based on known uses of the receiving waters near the discharge, are:

a. Industrial Service Supply
b. Navigation
c. Water Contact Recreation
d. Noncontact Water Recreation
e. Ocean Commercial and Sport Fishing
f. Wildlife Habitat
g. Preservation of Rare and Endangered Species
h. Fish Migration
i. Shellfish Harvesting
j. Estuarine Habitat

4. Receiving Water Salinity

Salinity data from three Central San Francisco Bay monitoring stations (Yerba Buena, Point Isabel, and Richardson Bay) monitored through the San Francisco Bay Regional Monitoring Program for Trace Substances (the RMP) are all well above both the Basin Plan and California Toxics Rule (CTR) thresholds for salt water; therefore, the reasonable potential analysis (RPA) and effluent limitations specified in this Order for discharges to San Francisco Bay are based on saltwater Basin Plan water quality objectives (WQOs) and saltwater CTR and National Toxics Rule (NTR) water quality criteria (WQC).

II. DESCRIPTION OF EFFLUENT

Table A below presents the quality of the discharge at Outfall E-001 and the intake water quality at Intake I-001, as indicated in the Discharger's Report of Waste Discharge (ROWD) dated November 17, 2003; for conventional and most non-conventional pollutants from June 2001 through June 2004. Mercury sampling data were collected from June 2002 through June 2004, and cyanide from March 2002 through February 2004. The reported values for several metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, and zinc) are the result of a separate monitoring period (April through June 2004) required by the Board to replace improperly analyzed data for these constituents submitted by the Discharger. Further discussion of these replacement data can be found in Section IV.1 of this Fact Sheet.

Table A. Summary of Intake and Discharge Data

	Outfall (E-001)	Intake (I-001)

Parameter	Average	Range of reported values	Average	Range of reported values
Biochemical oxygen demand (BOD)	<6[1]	--	--	--
Chemical oxygen demand (COD)	850[1]	--	--	--
Total organic carbon, mg/L	2.5[1]	--	8.7[1]	--
Chlorine residual, mg/L	--	0.0 – 0.09	--	--
TSS, mg/L[2]	11	<4 – 22.0	41	<1.0 - 180
Temperature, °F	68.2	48.6 - 95.4	58.1	48.2 – 74.5
Oil and Grease, mg/L[2]	All ND	<1 - <5.1	--	--
pH, standard unit	7.77	7.05 – 8.27	7.75	6.99 – 8.24
Ammonia	<0.20[1]	--	--	--
Acute Toxicity, Percent Survival – stickleback[3]	95.2	75 - 100	--	--
Acute Toxicity, Percent Survival – Sandabb[3]	99.8	90 - 100	--	--
Antimony, µg/L[4]	0.3	< 0.4 – 0.4	0.26	<0.22 - 0.4
Arsenic, µg/L	3.04	2.06 – 4.67	3.11	2.17 – 4.18
Beryllium, µg/L[4]	All ND	<0.5	All ND	<0.34
Cadmium, µg/L[5]	0.18	<0.05 – 0.5	0.24	<0.05 – 0.611
Chromium, Total, µg/L	1.53	0.65 – 2.72	1.72	0.75 – 2.33
Copper, µg/L[5]	3.22	<0.695 – 7.17	2.78	<0.695 – 5.39
Lead, µg/L	1.09	0.6 – 1.94	1.20	0.45 – 2.44
Mercury, µg/L	0.01	0.00303 – 0.0505	0.0094	0.0029 – 0.1002
Nickel, µg/L[5]	2.25	<0.7 – 4.33	2.27	<0.7 – 4.61
Selenium, µg/L[5]	1.16	<0.825 – 3.4	1.87	<0.825 – 5.89
Silver, µg/L[5]	0.18	<0.012 – 0.389	0.21	<0.12 – 0.39
Thallium, µg/L[5]	0.19	<0.111 – 0.5	0.24	<0.105 – 0.35
Zinc, µg/L[5]	5.60	<0.75 –18.9	5.26	<0.75 – 19.8
Cyanide, µg/L	All ND	<5 - <10	All ND	<5 - <10

ND = non-detect
[1] Only one sample is available from the Discharger's ROWD.
[2] Effluent values are for E-001C – boiler blowdown wastewater
[3] These are based on data collected from January 1999 through June 2004.
[4] Only two samples are available.
[5] Average was calculated with the non-detected values being replaced with half detection limit.

III. GENERAL RATIONALE AND REGULATORY BASES

- the Federal *Water Pollution Control Act*, Sections 301 through 305, and 307, and amendments thereto, as applicable (the Clean Water Act – the CWA);

- the Board's *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan);

- the State Water Resource Control Board's (the State Board's) *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Policy - the SIP);

- the U.S. EPA's May 18, 2000 *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (the California Toxics Rule – the CTR);

- the U.S. EPA's National Toxics Rule as promulgated [Federal Register Volume 57, 22 December 1992, page 60848] and subsequently amended (the NTR);

- the U.S. EPA's *Quality Criteria for Water* [EPA 440/5-86-001, 1986], and subsequent amendments, (the U.S. EPA Gold Book);

- applicable Federal Regulations [40 CFR Parts 122 and 131];

- 40 CFR Part 131.36(b) and amended [Federal Register Volume 60, Number 86, 4 May 1995, pages 22229-22237];

- the U.S. EPA's December 10, 1998 *National Recommended Water Quality Criteria* compilation [Federal Register Vol. 63, No. 237, pp. 68354-68364];

- the U.S. EPA's December 27, 2002 *Revision of National Recommended Water Quality Criteria* compilation [Federal Register Vol. 67, No. 249, pp. 79091-79095]; and

- guidance provided with State Board actions remanding permits to the Board for further consideration.

IV. SPECIFIC RATIONALE

Several specific factors affecting the development of limitations and requirements in the proposed Order are discussed as follows:

1. Recent Facility Performance

Section 402(o) of Clean Water Act (CWA) and 40 CFR § 122.44(l) require that water quality-based effluent limitations (WQBELs) in re-issued permits be at least as stringent as in the previous permit. The SIP specifies that interim effluent limitations, if required, must be based on current facility performance or on previous permit limitations, whichever is more stringent (unless anti-backsliding requirements are met). In determining what constitutes "recent plant performance," best professional judgment (BPJ) was used. Effluent data collected from June 2001 through June 2003 for conventional and most non-conventional pollutants, except as noted below, are considered representative of recent plant performance. Mercury sampling data collected from June 2002 through June 2004 and cyanide data collected from March 2002 through February 2004 are considered representative of recent plant performance.

The Board did not use sample data collected for several inorganic constituents (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, and zinc) from June 2001 through June 2003 to assess the recent plant performance with regard to effluent composition. Analyses for these constituents during this time period were flawed for one or more of the following reasons: (1) improper or untimely filtration and preservation of dissolved metal samples; (2) improper dilution of samples such that the adjusted reporting limit exceeded regulatory standards; and (3) failure to adjust sample results for some metals (e.g. copper) to account for saline matrix interference. After reviewing the data and attempting to identify valid sample results, Board staff concluded that all samples for these constituents collected during this time period were unreliable and therefore discarded. The Discharger conducted an expedited sampling program from April 28 through May 25, 2004 to provide 10 valid samples for use in developing this Order. In addition, the analysis included one additional set of samples collected on June 2, 2004 for some metals (cadmium, copper, selenium, and silver), and samples collected in January 2005 for PCBs.

2. Impaired Water Bodies on 303(d) List

On June 6, 2003, the U.S. EPA approved a revised list of impaired water bodies prepared by the State (hereinafter referred to as the 2002 303(d) list), prepared pursuant to provisions of Section 303(d) of the federal CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The pollutants impairing Lower San Francisco Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, nickel, PCBs, and dioxin-like PCBs. Copper, which was previously identified as impairing Lower San Francisco Bay, was not included as an impairing pollutant in the 2002 303(d) list and has been placed on the new Monitoring List.

The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads (TMDLs) and associated wasteload allocations (WLAs). The SIP and U.S. EPA regulations also require that final concentration-based WQBELs be included for all pollutants having reasonable potential to cause or contribute to an exceedance of applicable water quality standards (having reasonable potential or RP). The SIP requires that where the discharger has demonstrated infeasibility to meet the final WQBELs, interim performance-based limitations (IPBLs) or previous permit limitations (whichever is more stringent) be established in the permit, together with a compliance schedule that shall remain in effect until final effluent limitations are adopted. The SIP also requires the inclusion of appropriate provisions for waste minimization and source control where interim limitations are established.

3. State Thermal Plan and Clean Water Act Section 316(a)

On September 18, 1975, the State Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan). The Thermal Plan contains WQOs governing cooling water discharges. The Thermal Plan provides specific numeric and narrative WQOs for new discharges of heat. Thermal discharges defined as "existing" discharges are subject to narrative WQOs. Existing discharges of heat to Enclosed Bays (including San Francisco Bay) must "comply with limitations necessary to assure protection of beneficial uses."

The Discharger is considered an existing, continuous discharger as defined in the Thermal Plan. The most recent studies of the effects associated with thermal discharges were submitted in 1991 for both Potrero and Hunters Point Power Plants by PG&E. An updated study is required to

characterize the effects of the thermal plume on the aquatic habitat and aquatic species in the near-field environment. Among other items, the update will include a reassessment of the potential impacts of thermal demusseling.

4. Entrainment and Impingement Impacts—Clean Water Act Section 316(b)

On July 23, 2004, U.S. EPA promulgated new requirements to minimize adverse environmental impacts associated with existing cooling water intake structures under Section 316(b) of the Clean Water Act. This regulation, commonly referred to as "316(b) Phase II," became effective on September 7, 2004, 60 days after its publication in the Federal Register on July 9, 2004. The 316(b) regulations require existing facilities to either demonstrate a current ability to meet the performance standards outlined in the rule, or select one of four other compliance alternatives to minimize adverse environmental impacts associated with cooling water intake structure operations. If unable to demonstrate immediate compliance with the performance standards, the facility must undertake a multi-step process, which, together with input from the permitting authority (e.g., the Board), will determine the most economically and technologically feasible alternatives when making an assessment of Best Technology Available (BTA).

Phase II of the 316(b) regulations establishes performance standards for the reduction of impingement mortality and/or entrainment when compared to a baseline assessment. Impingement mortality of fish and shellfish must be reduced by 80 to 95 percent of the baseline number, while entrainment must be reduced by 60 to 80 percent. As an estuarine facility defined in 40 CFR Part 125.93, the Discharger is required to meet the performance standards for both impingement mortality and entrainment.

Under ordinary circumstances, a facility would be required to submit the appropriate study components (certification of compliance, Comprehensive Demonstration Study, etc.) as part of its NPDES renewal application. Because most of the study requirements involve substantial effort on the part of the facility and significant input from the permitting authority, U.S. EPA incorporated submission schedule flexibility for facilities whose permits expire within the time period of July 9, 2004 and July 8, 2008. Such facilities must submit a completed 316(b) Phase II package *no later* than three years and 180 days after publication in the Federal Register, or January 8, 2008.

The current permit for the Discharger was due to expire in 1999, and was administratively extended to 2004. The permit is listed as backlogged by US EPA Region 9. Situations such as these, i.e. long expired permits, were not discussed in the Phase II regulation. It is appropriate to establish a program to comply with these regulations within the permit. An information requirement letter (Attachment F to the Order) sent pursuant to Water Code §13267 specifies a schedule for compliance with these regulations (dated December 21, 2005).

A 2001 study prepared by the Discharger, *Construction and Thermal Impacts and First Quarter Larval Fish Assessment*, and a subsequent *6-month report on larval fish surveys* may be usable components of an eventual Comprehensive Demonstration Study. These studies seek to identify the species composition and abundance of larval fishes and cancer crabs in the vicinity of the facility as well as estimate potential losses due to entrainment through the facility intake structure. In 1978 and 1979, Potrero Power Plant, then owned by PG&E, conducted a field study (*316(b) Demonstration Study*) of the both the entrainment and impingement of fishes and shellfishes resulting from the operation of the cooling water intake structure. That study is insufficient for the purposes of the Phase II 316(b) regulation. Data collected at that time are 15 to 16 years old and may not sufficiently represent the near-field environment around Potrero due to changing

waterbody conditions and operations at the facility itself. In addition, sampling and analysis methods have improved considerably as the scope of knowledge concerning 316(b)-related issues has expanded. The 2001 study, on the other hand, may be considered acceptable, *in part*, for inclusion in the overall 316(b) Phase II submission package. Sampling and analysis methodologies are more consistent with the accepted protocols for entrainment studies conducted today.

5. Basis for Prohibitions

a). Prohibition A.1 (no discharges other than as described in the permit): This prohibition is based on the Basin Plan and BPJ.

b). Prohibition A.2 (no discharges other than storm water to storm drains or waters of the State other than as described in the permit): This prohibition is based on the Basin Plan and BPJ.

6. Basis for Effluent Limitations

a) Effluent Limitations B.1 (Outfall E-001) and B.2 (Outfall E-001C): The effluent limits for conventional pollutants are as follows:

	Constituent	Units	Monthly Average	Daily Average	Daily Maximum	Instantaneous Maximum
B.1.a.	pH	standard	(not to exceed 8.5 nor be less than 6.5)			
B.1.b.	Total Chlorine Residual	mg/L	--	--	--	0.0
B.1.c.	Temperature	degrees F	--	86	--	--
	(temperature of discharge not to exceed 100 degrees F for more than four hours, or 110 degrees F maximum during thermal demusseling)					
B.2.a	Total Suspended Solids	mg/L	30	--	100	--
B.2.b	Oil and Grease	mg/L	10	--	20	--

b) Effluent Limitation B.1.a (pH, minimum 6.5, maximum 8.5): This effluent limitation is unchanged from the previous permit. The limitation is based on the Basin Plan (Chapter 4, Table 4-2), which is derived from federal requirements (40 CFR 133.102) for shallow water discharges. Compliance with this previous permit effluent limitation has been demonstrated by existing plant performance.

c) Effluent Limitation B.1.b (Total Chlorine Residual): This effluent limitation is unchanged from the previous permit. The limitation is based on the Basin Plan (Chapter 4, Table 4-2), which is derived from federal requirements (40 CFR 133.102). Compliance has been demonstrated by existing plant performance.

d) Effluent Limitation B.1.c (Temperature): This effluent limitation is unchanged from the previous permit. The limitation is based on the California Thermal Plan. This is a previous permit effluent limitation and compliance has been demonstrated by existing plant performance.

e) Effluent Limitation B.2.a (Total Suspended Solids): This effluent limitation is unchanged from the previous permit and is based on the effluent limitation guidelines at 40 CFR Part 423. Compliance has been demonstrated by existing plant performance.

f) Effluent Limitation B.2.b (Oil and Grease): This effluent limitation is unchanged from the previous permit and is based on the effluent limitation guidelines at 40 CFR Part 423. Compliance has been demonstrated by existing plant performance.

g) Effluent Limitation B.3 (Whole Effluent Acute Toxicity): The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alternations in population, community ecology, or receiving water biota. These effluent toxicity limitations are necessary to ensure that this objective is protected. The whole effluent acute toxicity limitations for an eleven-sample median and an eleven-sample 90th percentile value are consistent with the previous permit and are based on the Basin Plan (Table 4-4, pg. 4–70). The previous Order required testing of two species (Sandabb and three-spine stickleback). This Order requires the Discharger to use the U.S. EPA's most recently promulgated testing method, currently the 5th edition with two testing species, topsmelt *(Cyprinodon variegatus)* and inland silverside *(Menidia beryllina)* tested concurrently, until a more sensitive species can be identified.

h) Effluent Limitation B.4 (Whole Effluent Chronic Toxicity): The chronic toxicity limitation is based on the Basin Plan's narrative toxicity objective on page 3-4. Chronic toxicity requirements were not included in the previous Order, but have been added in this Order consistent with a case by case determination provided by the Basin Plan. The main factors considered include: this is a major discharger; the volume of flow is significant; and the discharge does not receive 10:1 initial dilution.

i) Effluent Limitation B.5 (Toxic Substances):

1) Reasonable Potential Analysis (RPA)

Code of Federal Regulations Title 40, Part 122.44(d)(1)(i) (40 CFR 122.44(d)(1)(i)) specifies that permits must include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard" (have Reasonable Potential or RP). Thus, assessing whether a pollutant has RP is the fundamental step in determining whether or not a WQBEL is required. The following sections describe the RPA and the results of such an analysis for the pollutants identified in the Basin Plan and the CTR.

i) *WQOs and WQC*: The RPA uses Basin Plan WQOs, including narrative toxicity objectives in the Basin Plan and applicable WQC in the CTR/NTR, or site-specific objectives (SSOs) if available, after adjusting for site-specific hardness and translators, if applicable. The governing WQOs/WQC are shown in Attachment 1 of this Fact Sheet.

ii) *Methodology*: The RPA uses the methods and procedures prescribed in Section 1.3 of the SIP. Board staff has analyzed the effluent and background data and the nature of facility operations to determine if the discharge shows reasonable potential with respect to the governing WQOs or WQC. Attachment 1 of this Fact Sheet shows the step-wise process described in Section 1.3 of the SIP.

iii) *Effluent and background data*: The RPA is based on effluent data collected by the Discharger from April through June 2004 for most inorganic priority pollutants except

for mercury (June 2002- June 2004) and cyanide (March 2002 – February 2002) and from June 2002 though January 2005 for certain organic priority pollutants. Water quality data collected from San Francisco Bay at the Yerba Buena Island monitoring station through the RMP in 1993 to 2001 were reviewed to determine the maximum observed background values. The RMP station at Yerba Buena Island, located in the Central Bay, has been sampled for most of the inorganic and some of the organic toxic pollutants; however, not all the constituents listed in the CTR were analyzed by the RMP during this time. On May 15, 2003, a group of several San Francisco Bay Region dischargers (known as the Bay Area Clean Water Agencies, or BACWA) submitted a collaborative receiving water study, entitled the *San Francisco Bay Ambient Water Monitoring Interim Report*. This study summarizes the monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP. The RPA was conducted and the WQBELs were calculated using RMP data from 1993 through 2001 for inorganics and organics at the Yerba Buena Island, and additional data from the BACWA *Ambient Water Monitoring Interim Report* for the Yerba Buena Island RMP station.

iv) *RPA determination*: The RPA results are shown below in Table B and Attachment 1 of this Fact Sheet. The pollutants that exhibit reasonable potential are copper and mercury. A detected effluent value for bis (2-ethylhexyl) phthalate, which exceeded the applicable WQC, was not included in the analysis as noted in Footnote 3 of Table B.

Table B. Summary of Reasonable Potential Results

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL[1] (µg/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL[1] (µg/L)	RPA Results[2]
1	Antimony	**0.4**	4300	**1.8**	N
2	Arsenic	**4.67**	36	**2.46**	N
3	Beryllium	0.34	NA	**0.215**	N
4	Cadmium	**0.5**	9.4	**0.1268**	N
5b	Chromium (VI)	NA	50	**4.4**	N
6	Copper	**7.17**	3.7	**2.45**	Y
7	Lead	**1.94**	8.5	**0.8**	N
8	Mercury	**0.0505**	0.025	**0.0086**	Y
9	Nickel	**4.33**	8.3	**3.7**	N
10	Selenium	**3.4**	5.0	**0.39**	N
11	Silver	**0.389**	2.2	**0.0516**	N
12	Thallium	**0.5**	6.3	**0.21**	N
13	Zinc	**18.9**	86	**4.4**	N
14	Cyanide	5	1	0.4	N
16	2,3,7,8-TCDD (Dioxin)	0.00000015	0.000000014	1×10^{-9}	Ud
	TCDD TEQ	0.00000015	0.000000014	**0.000000071**	Y
17	Acrolein	3	780	0.5	N
18	Acrylonitrile	2.5	0.66	**0.03**	N
19	Benzene	0.5	71	0.05	N
20	Bromoform	0.5	360	0.5	N
21	Carbon Tetrachloride	0.5	4.4	**0.06**	N

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL[1] (µg/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL[1] (µg/L)	RPA Results[2]
22	Chlorobenzene	0.5	21000	0.5	N
23	Chlorodibromomethane	0.5	34	0.05	N
24	Chloroethane	0.5	NA	0.5	Uo
25	2-Chloroethylvinyl Ether	5	NA	0.5	Uo
26	Chloroform	0.5	NA	0.5	Uo
27	Dichlorobromomethane	0.5	46	0.05	N
28	1,1-Dichloroethane	0.5	NA	0.05	Uo
29	1,2-Dichloroethane	0.5	99	**0.04**	N
30	1,1-Dichloroethylene	0.5	3.2	0.5	N
31	1,2-Dichloropropane	0.5	39	0.05	N
32	1,3-Dichloropropylene	NA	1700	NA	N
33	Ethylbenzene	0.5	29000	0.5	N
34	Methyl Bromide	1	4000	0.5	N
35	Methyl Chloride	1	NA	0.5	Uo
36	Methylene Chloride	1	1600	**0.5**	N
37	1,1,2,2-Tetrachloroethane	0.5	11	0.05	N
38	Tetrachloroethylene	0.5	8.85	0.05	N
39	Toluene	0.5	200000	0.3	N
40	1,2-Trans-Dichloroethylene	0.5	140000	0.5	N
41	1,1,1-Trichloroethane	0.5	NA	0.5	N
42	1,1,2-Trichloroethane	0.5	42	0.05	N
43	Trichloroethylene	0.5	81	0.5	N
44	Vinyl Chloride	0.5	525	0.5	N
45	2-Chlorophenol	0.101	400	1.2	N
46	2,4-Dichlorophenol	0.101	790	1.3	N
47	2,4-Dimethylphenol	0.505	2300	1.3	N
48	2-Methyl-4,6-Dinitrophenol	0.505	765	1.2	N
49	2,4-Dinitrophenol	0.505	14000	0.7	N
50	2-Nitrophenol	0.101	NA	1.3	Uo
51	4-Nitrophenol	0.505	NA	1.6	Uo
52	3-Methyl-4-Chlorophenol	0.101	NA	1.1	Uo
53	Pentachlorophenol	0.328	7.9	1	N
54	Phenol	0.101	4,600,000	1.3	N
55	2,4,6-Trichlorophenol	0.101	6.5	1.3	N
56	Acenaphthene	0.0101	2700	**0.0015**	N
57	Acenaphthylene	0.0101	NA	**0.00053**	N
58	Anthracene	0.0101	110000	**0.0005**	N
59	Benzidine	0.505	0.00054	**0.0015**	N

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL[1] (µg/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL[1] (µg/L)	RPA Results[2]
60	Benzo(a)Anthracene	0.0101	0.049	**0.0053**	N
61	Benzo(a)Pyrene	0.0101	0.049	**0.00029**	N
62	Benzo(b)Fluoranthene	0.0202	0.049	**0.0046**	N
63	Benzo(ghi)Perylene	0.0101	NA	**0.0027**	Uo
64	Benzo(k)Fluoranthene	0.001	0.049	**0.0015**	N
65	Bis(2-Chloroethoxy)Methane	0.101	NA	0.3	Uo
66	Bis(2-Chloroethyl)Ether	0.101	1.4	0.3	N
67	Bis(2-Chloroisopropyl)Ether	0.101	170000	NA	N
68	Bis(2-Ethylhexyl)Phthalate	Un-determined	5.9	0.5	N[3]
69	4-Bromophenyl Phenyl Ether	0.101	NA	0.23	Uo
70	Butylbenzyl Phthalate	0.152	5200	0.52	N
71	2-Chloronaphthalene	0.0101	4300	0.3	N
72	4-Chlorophenyl Phenyl Ether	0.101	NA	0.3	Uo
73	Chrysene	0.0126	0.049	**0.0024**	N
74	Dibenzo(a,h)Anthracene	0.0101	0.049	**0.00064**	N
75	1,2 Dichlorobenzene	0.5	17000	0.8	N
76	1,3 Dichlorobenzene	0.101	2600	0.8	N
77	1,4 Dichlorobenzene	0.101	2600	0.8	N
78	3,3-Dichlorobenzidine	0.505	0.077	0.001	N
79	Diethyl Phthalate	0.101	120000	0.24	N
80	Dimethyl Phthalate	0.101	2900000	0.24	N
81	Di-n-Butyl Phthalate	0.253	12000	0.5	N
82	2,4-Dinitrotoluene	0.101	9.1	0.27	N
83	2,6-Dinitrotoluene	0.101	NA	0.29	Uo
84	Di-n-Octyl Phthalate	0.101	NA	0.38	Uo
85	1,2-Diphenylhydrazine	0.101	0.54	**0.0037**	N
86	Fluoranthene	0.0101	370	**0.011**	N
87	Fluorene	0.0101	14000	**0.00208**	N
88	Hexachlorobenzene	0.101	0.00077	**0.0000202**	N
89	Hexachlorobutadiene	0.5	50	0.3	N
90	Hexachlorocyclopentadiene	0.505	17000	0.31	N
91	Hexachloroethane	0.101	8.9	0.2	N
92	Indeno(1,2,3-cd) Pyrene	0.0101	0.049	**0.004**	N
93	Isophorone	0.101	600	0.3	N
94	Naphthalene	0.297	NA	**0.0023**	Uo
95	Nitrobenzene	0.101	1900	0.25	N
96	N-Nitrosodimethylamine	0.505	8.1	0.3	N

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL[1] (µg/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL[1] (µg/L)	RPA Results[2]
97	N-Nitrosodi-n-Propylamine	0.101	1.4	0.001	N
98	N-Nitrosodiphenylamine	0.101	16	0.001	N
99	Phenanthrene	0.0243	NA	**0.0061**	Uo
100	Pyrene	0.0101	11000	**0.0051**	N
101	1,2,4-Trichlorobenzene	0.5	NA	0.3	Uo
102	Aldrin	0.06	0.00014	NA	N
103	alpha-BHC	0.06	0.013	**0.000496**	N
104	beta-BHC	0.06	0.046	**0.000413**	N
105	gamma-BHC	0.06	0.063	**0.0007034**	N
106	delta-BHC	0.06	NA	**0.000042**	N
107	Chlordane	1	0.00059	**0.00018**	N
108	4,4'-DDT	0.06	0.00059	**0.000066**	N
109	4,4'-DDE	0.06	0.00059	**0.00069**	Ud
110	4,4'-DDD	0.06	0.00084	**0.000313**	N
111	Dieldrin	0.06	0.00014	**0.000264**	Ud
112	alpha-Endosulfan	0.06	0.0087	**0.000031**	N
113	beta-Endosulfan	0.06	0.0087	**0.000069**	N
114	Endosulfan Sulfate	0.06	240	**0.0000819**	N
115	Endrin	0.06	0.0023	**0.000036**	N
116	Endrin Aldehyde	0.06	0.81	NA	N
117	Heptachlor	0.06	0.00021	**0.000019**	N
118	Heptachlor Epoxide	0.06	0.00011	**0.000094**	N
119-125	PCBs	0.5	0.00017	NA	N
126	Toxaphene	1	0.0002	NA	N
	Tributyltin	NA	0.01	0.001	Ud
	Total PAHs	NA	15	**0.052**	N

[1] Values for MEC or maximum background in bold are the actual detected concentrations, otherwise the values shown are the minimum detection levels.
NA = Not Available (there is no monitoring data or WQO/WQC for this constituent).

[2] RP =Yes, if either MEC or Background > WQO/WQC.
RP = No, if both MEC or background < WQO/WQC or all effluent concentrations non-detect and background <WQO/WQC or no background available.
RP = Uo (undetermined if no objective promulgated)
RP = Ud if effluent data non-detect above the WQO/WQC.

[3] The Discharger identified inappropriate collection equipment (now removed) as the source of bis (2-ethylhexyl) phthalate. The Board agrees with the Discharger's assertion and has not established an effluent limitation. Four additional semiannual samples will be required at which time the Board will re-evaluate RP, the need for continued sampling and the possible establishment of an effluent limitation.

v) *Constituents with limited data*: Reasonable potential could not be determined for some of the organic priority pollutants due to the absence of effluent data or applicable

WQOs/WQC. As required by the Board's August 6, 2001 Letter from Board staff to all permittees, the Discharger is required to continue to monitor for those pollutants in this category using analytical methods that provide the best detection limits reasonably feasible. These pollutants' RP will be reevaluated in the future to determine whether there is a need to add numeric effluent limitations to the permit or to continue monitoring.

vi) *Pollutants with no reasonable potential*: WQBELs are not included in the Order for constituents that do not have reasonable potential to cause or contribute to exceedance of applicable WQOs or WQC. However, monitoring for those pollutants is still required, under the provisions of the Board's August 6, 2001 Letter. If concentrations of these constituents are found to increase significantly, the Discharger will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

vii) *Permit reopener:* The permit includes a reopener provision to allow numeric effluent limitations to be added for any constituent that in the future exhibits reasonable potential to cause or contribute to exceedance of a WQO or WQC. This determination, based on monitoring results, will be made by the Board.

2) Dilution

The Basin Plan prohibits the discharge of any wastewater that has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive an initial dilution of at least 10:1. In part, the Basin Plan states that

> "This prohibition will (a) provide an added degree of protection from the continuous effects of waste discharge, (b) provide a buffer against the effects of abnormal discharges caused by temporary plant upsets or malfunctions, (c) minimize public contact with undiluted wastes, and (d) reduce the visual (aesthetic) impact of waste discharges."

The Basin Plan (Table 4-1, Item 1) prohibits the discharge of any wastewater that has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive an initial dilution of at least 10:1. Although the discharge does not receive initial dilution, it complies with the discharge prohibition because it is not a wastewater with particular characteristics of concern to beneficial uses.

As indicated in the Basin Plan, the Board considers discharges of treated sewage and other discharges where the treatment process in subject to upset to contain particular characteristics of concern. The Basin Plan states: "This prohibition will …. Provide a buffer against the effects of abnormal discharges caused by temporary plant upsets or malfunctions …" The dilution requirement is to provide a contingency in the event of temporary treatment plant malfunction and to minimize public contact with undiluted waste. However this discharge does not contain treated sewage and does not contain wastewater from a treatment process subject to upset. Therefore the prohibition does not apply in this context.

Moreover, virtually all of the once through cooling water discharge consists of Bay water taken from the Bay with minimal characteristics of concern except thermal waste. The water is used for condensing steam through heat exchangers and is returned to the Bay at a

temperature higher than that of the intake. The Basin Plan, aside from requiring that the receiving water temperature not be altered if doing so adversely affect beneficial uses, defers its regulation of thermal waste to the State Thermal Plan (see Finding 16 of this Order) . The other characteristics of concern are chlorine, pH, and possibly the toxic pollutants copper and mercury. The discharger has excellent compliance with its permit limits for chlorine and pH, which demonstrates excellent reliability of its treatment system for these parameters. For copper and mercury, this Order requires the discharger to determine it its processes contribute there pollutants to the discharge. Existing information does not suggest that the discharge is a substantial source of these pollutants. If the investigations show that these processes do constitute a substantial source of these pollutants to the Bay, the Board my consider imposing an initial 10:1 dilution.

3) Final Water Quality-Based Effluent Limitations

Toxic substances are regulated by WQBELs derived from the Basin Plan, Tables 3-3 and 3-4, the CTR, the NTR, and/or best professional judgment (BPJ) as defined in Section IV of the attached Fact Sheet. WQBELs in this Order are revised and updated from the limits in the previous Order, and their presence in this Order is based on the evaluation of the Discharger's data as described below under the RPA. Numeric WQBELs are required for all constituents that have a reasonable potential to cause or contribute to an excursion above any State water quality standard. Reasonable potential is determined and final WQBELs are developed using the methodology outlined in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Plan or the SIP). If the Discharger demonstrates that the final limits will be infeasible to meet and provides justification for a compliance schedule, then interim limits are established, with a compliance schedule to achieve the final limits. The WQOs or WQC used for each pollutant with Reasonable Potential is indicated in Table C below as well as in Attachment 2.

Table C. Water Quality Objectives/Criteria for Pollutants with RP

Pollutant	Chronic WQO/WQC (µg/L)	Acute WQO/WQC (µg/L)	Human Health WQC (µg/L)	Basis of Lowest WQO /WQC Used in RPA
Copper	3.7	5.8	--	BP
Mercury	0.025	2.1	0.051	BP

4) Interim Limitations

Interim effluent limitations were derived for those constituents (copper and mercury) for which the Discharger has shown infeasibility of complying with the respective final limitations and has demonstrated that compliance schedules are justified based on the Discharger's source control and pollution minimization efforts in the past and continued efforts in the present and future. The interim effluent concentration limitations for copper and mercury are based on statistical analyses of data submitted by the Discharger. The interim limitation analysis for mercury used only ultraclean data. The interim limitations are also discussed in more detail below.

5) Feasibility Evaluation

The Discharger submitted an infeasibility to comply report on July 13, 2004 for copper and mercury. For constituents from which Board staff could perform a meaningful statistical analysis (i.e., copper and mercury), it used self-monitoring data from 2001-2003 to compare the mean, 95th percentile, and 99th percentile with the long-term average (LTA), AMEL, and MDEL to confirm if it is feasible for the Discharger to comply with WQBELs. If the LTA, AMEL, and MDEL all exceed the mean, 95th percentile, and 99th percentile, it is infeasible for the Discharger to comply with WQBELs. Table D below shows these comparisons in µg/L:

Table D: Summary of Feasibility Analysis

Constituent	Mean vs. LTA	95th vs. AMEL	99th vs. MDEL	Feasible to Comply
Copper (based on Weibull distribution fit)	3.2 > 2.0	6.6 > 3.0	8.4 > 5.8	**No**
Mercury (based log-logistic distribution fit)	0.010 = 0.010	0.036 > 0.017	0.046 = 0.046	**No**

This permit establishes a compliance schedule until May 18, 2010 for copper and April 28, 2010 for mercury. These compliance schedules exceed the length of the permit; therefore, the calculated final limitations are intended for point of reference for the feasibility demonstration.

During the compliance schedules, interim limitations are included based on current treatment facility performance or on previous permit limitations, whichever is more stringent, to maintain existing water quality. **Attachment 5** details the general basis for final compliance dates. The Board may take appropriate enforcement actions if interim limitations and requirements are not met.

i. Copper – Further Discussion and Rationale for Interim Effluent Limitation: Interim effluent limitations are required for copper since the Discharger has demonstrated and the Board verified that the final effluent limitations calculated according to the SIP (AMEL of 3.0 µg/L and MDEL of 5.8 µg/L) will be infeasible to meet. The SIP requires the interim numeric effluent limitation for the pollutant be based on either current treatment facility performance or on the previous Order's limitation, whichever is more stringent. Self-monitoring data from 2004 indicate that effluent copper concentrations ranged from 1.28 µg/L to 7.17 µg/L (11 samples). Board staff calculated an interim performance-based limitation (IPBL) of 10.3 µg/L (3 standard deviations above the mean). The previous permit did not contain an effluent limitation for copper. Therefore, 10.3 µg/L is established in this Order as the interim limitation and will remain effect until December 30, 2009, or until the Board amends the limitation based on additional data.

ii. Mercury – Further Discussion and Rationale for Interim Effluent Limitation: Interim effluent limitations are required for mercury since the Discharger has demonstrated and the Board verified that the final effluent limitations calculated according to the SIP (AMEL of 0.017 µg/L and MDEL of 0.046 µg/L) will be infeasible to meet. The SIP requires the interim numeric effluent limitation for the pollutant be based on either current treatment facility performance or on the previous Order's limitation, whichever is more stringent. The previous permit did not contain and effluent limitation for mercury.

Effluent concentrations from 2002 through 2004 ranged from 0.00303 to 0.0505 µg/L (14 samples). Board staff calculated an IPBL of 0.056 µg/L (3 standard deviations above the mean). This IPBL shall remain in effect until March 31, 2010, or until the Board amends the limitation based on a WLA in the TMDL for mercury. However, during the next permit reissuance, the Board may reevaluate the interim mercury limitation.

6) Attainability of Interim Performance-Based Limitations

i. Copper

During the spring 2004 sampling period, the facility's effluent concentrations for copper ranged from 1.28 to 7.17 µg/L (11 samples). All effluent copper concentrations were below the 10.3 µg/L interim limitation, it is, therefore, expected that the Discharger can comply with the interim limitation for copper.

ii. Mercury

Self-monitoring data from 2002 through 2004 indicate that mercury concentrations ranged from 0.00303 to 0.0505µg/L. All of the 14 samples were below the interim limitation of 0.056 µg/L. It is, therefore, expected that the facility can comply with the interim concentration limitation of 0.056 µg/L for mercury.

7. Basis for Receiving Water Limitations

1). Receiving water limitations C.1 and C.2 (conditions to be avoided): These limitations are based on the previous permit and the narrative/numerical objectives contained in Chapter 3 of the Basin Plan, pages 3-2 – 3-5.

2). Receiving water limitation C.3 (compliance with State Law): This requirement is in the previous permit, requires compliance with Federal and State law, and is self-explanatory.

8. Basis for Self-Monitoring Requirements

The SMP includes monitoring at the outfall for conventional, non-conventional, and toxic pollutants, and acute and chronic toxicity. For copper and mercury, the Discharger will perform monthly monitoring to demonstrate compliance with interim limitations. In lieu of near field discharge-specific ambient monitoring, it is generally acceptable that the Discharger participate in collaborative receiving water monitoring with other dischargers under the provisions of the Board's August 6, 2001 Letter and the RMP.

9. Basis for Provisions

a) Provision D.1. (Permit Compliance and Rescission of Previous Permit): Time of compliance is based on 40 CFR 122. The basis of this Order superceding and rescinding the previous permit is 40 CFR 122.46.

b) Provision D.2 (Effluent Characterization Study): This provision is based on the Basin Plan and the SIP.

c) Provision D.3 (Receiving Water Study): This provision is based on the Basin Plan and the SIP.

d) Provision D.4 (Mercury Compliance Study): This provision, based on BPJ, requires the Discharger to assess contributions of mercury in the bay from their process water. These data will facilitate a mass limit or support a finding indicating there is minimum contribution of mercury into the bay from the facility.

e) Provision D.5 (Thermal Study): This provision, based on the Thermal Plan and Section 316(a) of the Clean Water Act, requires the Discharger to characterize the extent of impacts associated with the thermal discharge. The Discharger submitted the most recent thermal plume characterization study in 1991. Completion of an updated thermal study will provide the Board with more definitive data to assess adverse impacts, if any, associated with the discharge of heated water during the next reissuance process.

f) Provision D.6 (Impingement/Entrainment Study): This provision is based on revised regulations under Clean Water Act Section 316(b) for existing facilities to determine BTA for minimizing adverse environmental impacts associated with impingement and/or entrainment. New regulations for cooling water intake structures effective September 7, 2004 require all existing steam electric facilities that meet certain requirements to either adopt a pre-approved technology to minimize adverse environmental impacts or conduct a comprehensive demonstration study to identify the most cost-effective compliance strategy.

g) Provision D.7 (Intake Water Study): This provision, based on the SIP and Basin Plan, requires the Discharger to assess the appropriateness, if any, of intake water credits for pollutants for which a reasonable potential has been determined. Current influent and ambient background data indicate the presence of some pollutants in the intake. At this time, data are insufficient to determine the validity of granting intake credits as defined in section 1.4 of the SIP. Collection of additional intake data will ensure sufficient data to make an accurate determination of intake credits, if requested by the Discharger, during the next permit reissuance.

h) Provision D.8 (PCB Stormwater Sediment Study): This provision is based BPJ. Although PCBs were not detected in the effluent, the detection limits are above the objectives. The storm drain sediments have not been analyzed for PCBs. PCBs are more likely to be found in sediments than in the water. This study is required in order to verify that there is no presence of PCBs in storm drain sediment that could contribute to PCBs in the stormwater discharged.

i) Provision D.9 (Pollutant Prevention and Minimization Program): This provision is based on the Basin Plan, pages 4-25 – 4-28, and the SIP, Section 2.1.

j) Provision D.10 (Whole Effluent Acute Toxicity): This provision establishes conditions by which compliance with permit effluent limitations for acute toxicity will be demonstrated. Conditions initially include the use of 96-hour static renewal bioassays, the use of rainbow trout, and the use of approved test methods as specified, currently 5th Edition U.S. EPA protocol.

k) Provision D.11. (Whole Effluent Chronic Toxicity): This provision establishes conditions and protocol by which compliance with the Basin Plan narrative WQO for toxicity will be demonstrated. Conditions include required monitoring and evaluation of the effluent for chronic toxicity and numerical values for chronic toxicity evaluation to be used as "triggers" for initiating accelerated monitoring and toxicity reduction evaluation(s). This provision also requires the Discharger to conduct screening phase monitoring and implement toxicity identification and reduction evaluations when there is consistent chronic toxicity in the discharge. New testing species and/or test methodology may be available before the next permit renewal. Characteristics, and thus toxicity, of the process wastewater may also have changed during the life of the permit. This screening phase monitoring is important to help determine which test species is most sensitive to the toxicity of the effluent for future compliance monitoring. The proposed conditions in the draft permit for chronic toxicity are based on the Basin Plan narrative WQO for toxicity, Basin Plan effluent limitations for chronic toxicity (Basin Plan, Chapter 4), U.S. EPA and State Board Task Force guidance, applicable federal regulations [40 CFR 122.44(d)(1)(v)], and BPJ.

l) Provision D.12 (Optional Mass Offset): This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to San Francisco Bay.

m) Provision D.13 (Intake Credit Recommendation Report): This provision is based on Section 1.4.4 of the SIP and requires the Discharger to identify the constituents that appear to qualify for intake credits.

n) Provision D.14 (Operations and Maintenance Manual and Reliability Report), D.15, and D.16 (Contingency Plan Update and Status Report): These provisions are based on the Basin Plan, the requirements of 40 CFR 122, and the previous permit.

o) Provision D.17 (New Water Quality Objectives): This provision allows future modification of the permit and permit effluent limitations as necessary in response to updated WQOs that may be established in the future. This provision is based on 40 CFR 123.

p) Provision D.18 (Self-Monitoring Program): The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the Self Monitoring Program (SMP) of the Permit. This provision requires compliance with the SMP and is based on 40 CFR

122.63. The SMP is a standard requirement in almost all NPDES permits issued by the Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Board's policies. The SMP also contains a sampling program specific for the facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs.

q) Provision D.19 (Standard Provisions and Reporting Requirements): The purpose of this provision is to require compliance with the standard provisions and reporting requirements given in this Board's document titled *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (the Standard Provisions), or any amendments thereafter. That document is incorporated in the Order as an attachment to it. Where provisions or reporting requirements specified in the Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the permit specifications shall apply. The standard provisions and reporting requirements given in the above document are based on various state and federal regulations with specific references cited therein.

r) Provisions E.20 (Change in Control or Ownership): This provision is based on 40 CFR 122.61.

s) Provision D.21 (Permit Reopener): This provision is based on 40 CFR 123.

t) Provision D.22 (NPDES Permit): This provision is based on 40 CFR 123.

u) Provisions E.23 (Order Expiration and Reapplication): This provision is based on 40 CFR 122.46(a).

V. WASTE DISCHARGE REQUIREMENT APPEALS

Any person may petition the State Water Resources Control Board to review the decision of the Board regarding the Waste Discharge Requirements. A petition must be made within 30 days of the Board public hearing.

VI. ATTACHMENTS

Attachment 1: RPA Results for Priority Pollutants
Attachment 2: Calculation of Final WQBELs
Attachment 3: Intake and Effluent Data
Attachment 4: RMP Data
Attachment 5: General Basis for Final Compliance Dates

Attachment 1

RPA Results for Priority Pollutants

Mirant Potrero Power Plant
NPDES Permit Reissuance

Input for RPA

Green highlight checks for input inconsistency (see "input check" spreadsheet for logic)
Yellow highlights are user input

		EFFLUENT DATA					RECEIVING WATER (BACKGROUND) DATA (B)					
	Constituent name	*Effluent Data Available (Y/N)?*	*Are all data points non-detects (Y/N)?*	*If all data points ND Enter the min detection limit (MDL) (ug/L)*	*Enter the pollutant effluent detected max conc (ug/L)*	Input Check	*B Available (Y/N)?*	*Are all B non-detects (Y/N)?*	*If all data points ND Enter the min detection limit (MDL) (ug/L)*	*Enter the Detected Maximum Background Conc*	Input Check	*7) Review other information in the SIP page 4. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.*
1	Antimony	Y	N		0.4		Y	N		1.8		
2	Arsenic	Y	N		4.67		Y	N		2.46		
3	Beryllium	Y	Y	0.34			Y	N		0.215		No Criteria
4	Cadmium	Y	N		0.5		Y	N		0.1268		
5a	Chromium (III)	N					N					
5b	Chromium (VI)	N					Y	N		4.4		
5	Chromium Total	Y	N		0.64		Y	N		4.4		
6	Copper	Y	N		7.17		Y	N		2.45		
7	Lead	Y	N		1.94		Y	N		0.8		
8	Mercury (303d listed)	Y	N		0.0505		Y	N		0.0086		
9	Nickel (303d listed)	Y	N		4.33		Y	N		3.7		
10	Selenium (303d listed)	Y	N		3.4		Y	N		0.39		
11	Silver	Y	N		0.389		Y	N		0.0516		
12	Thallium	Y	N		0.5		Y	N		0.21		
13	Zinc	Y	N		18.9		Y	N		4.4		
14	Cyanide	Y	Y	5			Y	Y	0.4			
15	Asbestos	Y	N		72.6		N					No Criteria
16	2,3,7,8 TCDD (303d listed)	Y	Y	0.0000015			Y	Y	1.00E-09			
	TCDD TEQ	Y	Y	0.0000015			Y	N		7.10E-08		
17	Acrolein	Y	Y	3			Y	Y	0.5			
18	Acrylonitrile	Y	Y	2.5			Y	N		0.03		
19	Benzene	Y	Y	0.5			Y	Y	0.05			
20	Bromoform	Y	Y	0.5			Y	Y	0.5			
21	Carbon Tetrachloride	Y	Y	0.5			Y	N		0.06		
22	Chlorobenzene	Y	Y	0.5			Y	Y	0.5			
23	Chlorodibromomethane	Y	Y	0.5			Y	Y	0.05			
24	Chloroethane	Y	Y	0.5			Y	Y	0.5			No Criteria
25	2-Chloroethylvinyl ether	Y	Y	5			Y	Y	0.5			No Criteria
26	Chloroform	Y	Y	0.5			Y	Y	0.5			No Criteria
27	Dichlorobromomethane	Y	Y	0.5			Y	Y	0.05			
28	1,1-Dichloroethane	Y	Y	0.5			Y	Y	0.05			No Criteria
29	1,2-Dichloroethane	Y	Y	0.5			Y	N		0.04		
30	1,1-Dichloroethylene	Y	Y	0.5			Y	Y	0.5			
31	1,2-Dichloropropane	Y	Y	0.5			Y	Y	0.05			
32	1,3-Dichloropropylene	N					N					
33	Ethylbenzene	Y	Y	0.5			Y	Y	0.5			
34	Methyl Bromide	Y	Y	1			Y	Y	0.5			
35	Methyl Chloride	Y	Y	1			Y	Y	0.5			No Criteria
36	Methylene Chloride	Y	Y	1			Y	N		0.5		
37	1,1,2,2-Tetrachloroethane	Y	Y	0.5			Y	Y	0.05			
38	Tetrachloroethylene	Y	Y	0.5			Y	Y	0.05			
39	Toluene	Y	Y	0.5			Y	Y	0.3			
40	1,2-Trans-Dichloroethylene	Y	Y	0.5			Y	Y	0.5			
41	1,1,1-Trichloroethane	Y	Y	0.5			Y	Y	0.5			No Criteria
42	1,1,2-Trichloroethane	Y	Y	0.5			Y	Y	0.05			
43	Trichloroethylene	Y	Y	0.5			Y	Y	0.5			
44	Vinyl Chloride	Y	Y	0.5			Y	Y	0.5			
45	2-Chlorophenol	Y	Y	0.101			Y	Y	1.2			
46	2,4-Dichlorophenol	Y	Y	0.101			Y	Y	1.3			
47	2,4-Dimethylphenol	Y	Y	0.505			Y	Y	1.3			
48	2-Methyl- 4,6-Dinitrophenol	Y	Y	0.505			Y	Y	1.2			
49	2,4-Dinitrophenol	Y	Y	0.505			Y	Y	0.7			
50	2-Nitrophenol	Y	Y	0.101			Y	Y	1.3			No Criteria
51	4-Nitrophenol	Y	Y	0.505			Y	Y	1.6			No Criteria
52	3-Methyl 4-Chlorophenol	Y	Y	0.101			Y	Y	1.1			No Criteria
53	Pentachlorophenol	Y	Y	0.328			Y	Y	1			
54	Phenol	Y	Y	0.101			Y	Y	1.3			
55	2,4,6-Trichlorophenol	Y	Y	0.101			Y	Y	1.3			
56	Acenaphthene	Y	Y	0.0101			Y	N		0.0015		
57	Acenaphthylene	Y	Y	0.0101			Y	N		0.00053		No Criteria
58	Anthracene	Y	Y	0.0101			Y	N		0.0005		
59	Benzidine	Y	Y	0.505			Y	Y	0.0015			
60	Benzo(a)Anthracene	Y	Y	0.0101			Y	N		0.0053		
61	Benzo(a)Pyrene	Y	Y	0.0101			Y	N		0.00029		
62	Benzo(b)Fluoranthene	Y	Y	0.0202			Y	N		0.0046		
63	Benzo(ghi)Perylene	Y	Y	0.0101			Y	N		0.0027		No Criteria
64	Benzo(k)Fluoranthene	Y	Y	0.0202			Y	N		0.0015		
65	Bis(2-Chloroethoxy)Methane	Y	Y	0.101			Y	Y	0.3			No Criteria
66	Bis(2-Chloroethyl)Ether	Y	Y	0.101			Y	Y	0.3			
67	Bis(2-Chloroisopropyl)Ether	Y	Y	0.101			N					
68	Bis(2-Ethylhexyl)Phthalate	Y	Y	7.43			Y	Y	0.5			
69	4-Bromophenyl Phenyl Ether	Y	Y	0.101			Y	Y	0.23			No Criteria
70	Butylbenzyl Phthalate	Y	Y	0.152			Y	Y	0.52			
71	2-Chloronaphthalene	Y	Y	0.0101			Y	Y	0.3			
72	4-Chlorophenyl Phenyl Ether	Y	Y	0.101			Y	Y	0.3			No Criteria
73	Chrysene	Y	Y	0.0126			Y	N		0.0024		
74	Dibenzo(a,h)Anthracene	Y	Y	0.0101			Y	N		0.00064		
75	1,2-Dichlorobenzene	Y	Y	0.5			Y	Y	0.8			
76	1,3-Dichlorobenzene	Y	Y	0.101			Y	Y	0.8			
77	1,4-Dichlorobenzene	Y	Y	0.101			Y	Y	0.8			
78	3,3 Dichlorobenzidine	Y	Y	0.505			Y	Y	0.001			
79	Diethyl Phthalate	Y	Y	0.101			Y	Y	0.24			
80	Dimethyl Phthalate	Y	Y	0.101			Y	Y	0.24			
81	Di-n-Butyl Phthalate	Y	Y	0.253			Y	Y	0.5			
82	2,4-Dinitrotoluene	Y	Y	0.101			Y	Y	0.27			
83	2,6-Dinitrotoluene	Y	Y	0.101			Y	Y	0.29			No Criteria
84	Di-n-Octyl Phthalate	Y	Y	0.101			Y	Y	0.38			No Criteria
85	1,2-Diphenylhydrazine	Y	Y	0.101			Y	N		0.0037		
86	Fluoranthene	Y	Y	0.0101			Y	N		0.011		
87	Fluorene	Y	Y	0.0101			Y	N		0.00208		
88	Hexachlorobenzene	Y	Y	0.101			Y	N		0.0000202		
89	Hexachlorobutadiene	Y	Y	0.5			Y	Y	0.3			
90	Hexachlorocyclopentadiene	Y	Y	0.505			Y	Y	0.31			
91	Hexachloroethane	Y	Y	0.101			Y	Y	0.2			
92	Indeno(1,2,3-cd)Pyrene	Y	Y	0.0101			Y	N		0.004		
93	Isophorone	Y	Y	0.101			Y	Y	0.3			
94	Naphthalene	Y	Y	0.297			Y	N		0.0023		No Criteria
95	Nitrobenzene	Y	Y	0.101			Y	Y	0.25			
96	N-Nitrosodimethylamine	Y	Y	0.505			Y	Y	0.3			
97	N-Nitrosodi-n-Propylamine	Y	Y	0.101			Y	Y	0.001			
98	N-Nitrosodiphenylamine	Y	Y	0.101			Y	Y	0.001			
99	Phenanthrene	Y	Y	0.0243			Y	N		0.0061		No Criteria
100	Pyrene	Y	Y	0.0101			Y	N		0.0051		
101	1,2,4-Trichlorobenzene	Y	Y	0.5			Y	Y	0.3			No Criteria
102	Aldrin	Y	Y	0.06			N					
103	alpha-BHC	Y	Y	0.06			Y	N		0.0004496		
104	beta-BHC	Y	Y	0.06			Y	N		0.000413		
105	gamma-BHC	Y	Y	0.06			Y	N		0.0007034		
106	delta-BHC	Y	Y	0.06			Y	N		0.000042		No Criteria
107	Chlordane (303d listed)	Y	Y	1			Y	N		0.00018		
108	4,4'-DDT (303d listed)	Y	Y	0.06			Y	N		0.000066		
109	4,4'-DDE (linked to DDT)	Y	Y	0.06			Y	N		0.000693		
110	4,4'-DDD	Y	Y	0.06			Y	N		0.000313		
111	Dieldrin (303d listed)	Y	Y	0.06			Y	N		0.000264		
112	alpha-Endosulfan	Y	Y	0.06			Y	N		0.000031		
113	beta-Endolsulfan	Y	Y	0.06			Y	N		0.000069		
114	Endosulfan Sulfate	Y	Y	0.06			Y	N		0.0000819		
115	Endrin	Y	Y	0.06			Y	N		0.000036		
116	Endrin Aldehyde	Y	Y	0.06			N					
117	Heptachlor	Y	Y	0.06			Y	N		0.000019		
118	Heptachlor Epoxide	Y	Y	0.06			Y	N		0.000094		
119-125	PCBs sum (2)	Y	Y	0.5			N					
126	Toxaphene	Y	Y	1			N					
	Tributylin	N					Y	Y	0.001			
	Total PAHs	N					Y	N		0.052		

Attachment 2

Intake and Effluent Data

Mirant Potrero Power Plant

Intake Water Quality Data
(Inorganics)

Intake I-001

Date	<	Antimony (ug/L)	<	Arsenic (ug/L)	<	Beryllium (ug/L)	<	Cadmium (ug/L)	<	Chromium (ug/L)	<	Copper (ug/L)	<	Lead (ug/L)	<	Mercury (ug/L)	<	Nickel (ug/L)	<	Selenium (ug/L)	<	Silver (ug/L)	<	Thallium (ug/L)	<	Zinc (ug/L)	<	Cyanide (ug/L)
6/23/1999															<	0.2												
12/8/1999															<	0.2												
7/5/2000															<	0.1												
12/13/2000															<	0.2												
7/12/2001															<	0.2												
10/24/2001															<	0.2												
3/21/2002																											<	10
4/26/2002																											<	10
5/28/2002																											<	10
6/25/2002																**0.0172**											<	10
7/23/2002																**0.00498**											<	10
8/14/2002																**0.00862**											<	10
9/18/2002																**0.00288**											<	10
10/2/2002																**0.00337**												
11/21/2002																**0.00438**											<	10
12/19/2002																**0.1002**											<	10
1/23/2003																**0.00895**											<	10
2/7/2003																**0.00589**											<	10
3/28/2003																											<	10
4/30/2003																											<	10
5/7/2003																											<	10
6/30/2003																												
8/25/2003																												
9/25/2003																												
10/22/2003															<	0.03												
10/30/2003																**0.0088**											<	10
11/7/2003																											<	10
12/4/2003																**0.0091**											<	10
1/31/2004																**0.0115**											<	5
2/9/2004																**0.00533**											<	5
3/3/2004																**0.0196**												
4/2/2004																**0.00621**												
4/29/2004	<	0.22		2.7	<	0.34		0.35		0.75		2.7		0.45			<	0.7		2.7		0.25		0.2	<	0.75		
4/28/2204		0.4		2.55	<	0.34		0.45		1.7		2.7		0.75				1.75		5.85		0.3		0.3	<	0.75		
5/4/2004				2.17				0.389		1.61		5.39		1.17				4.61	<	0.825	<	0.12		0.333		11.7		
5/5/2004				2.39				0.333		1.61		4.67		1.28		0.00944		2.61	<	0.825	<	0.12		0.333		7.56		
5/11/2004				2.83				0.167		2.28		3.78		1.33				1.61	<	0.825		0.17		0.222		19.8		
5/13/2004				3.39			<	0.05		1.44		3.17		1				0.722	<	0.825	<	0.12		0.111	<	0.75		
5/19/2004				3				0.25		1.2		2.8		0.6				2.35	<	0.825		0.2		0.2		6.85		
5/18/2004				3.2			<	0.05		2.3	J	1.8		1				3.75	<	0.825		0.25		0.35	<	0.75		
5/24/2004				4.78				0.611		2.33		2.83		2.44				4.17		5.89		0.39		0.278	<	0.75		
5/25/2004				4.11				0.0566		1.94	<	0.695		1.94				3.06		1.78		0.39	<	0.105		4.83		
6/2/2004							<	0.05			<	0.695				0.00521			<	0.825		0.35					<	5

Mirant Potrero Power Plant

Effluent Water Quality Data
(Inorganics)

Outfall E-001																															
Date	<	Antimony (ug/L)	<	Arsenic (ug/L)	<	Beryllium (ug/L)	<	Cadmium (ug/L)	<	Chromium (ug/L)	<	Copper (ug/L)	<	Lead (ug/L)	<	Mercury (ug/L)	<	Nickel (ug/L)	<	Selenium (ug/L)	<	Silver (ug/L)	<	Thallium (ug/L)	<	Zinc (ug/L)	<	Cyanide (ug/L)
3/21/2002																											<	10
4/26/2002																											<	10
5/28/2002																											<	10
6/25/2002																0.00923	<										<	10
7/23/2002																0.00448											<	10
8/14/2002																0.00778											<	10
9/18/2002																0.00303											<	10
10/2/2002																0.00322												
11/21/2002																0.00464	<										<	10
12/19/2002																0.05050											<	10
1/23/2003																0.01380											<	10
2/7/2003																0.00617											<	10
3/28/2003																0.01070											<	10
4/30/2003																											<	10
5/7/2003																											<	10
6/30/2003																												
8/25/2003																												
9/25/2003																												
10/22/2003																	<											
10/30/2003																0.00640											<	10
11/7/2003																											<	10
12/4/2003																0.00400											<	10
1/31/2004																0.00506											<	5
2/9/2004																0.00526											<	5
3/3/2004																0.00403												
4/2/2004																0.00679												
4/29/2004	<	0.4		2.55	<	0.5		0.4		0.65		4.7		0.75			<	0.7		2.55		0.25		0.15	<	0.75		
4/28/2204		0.4		2.65	<	0.5		0.5		0.8		2.25		0.6			<	0.7		3.4		0.25		0.5	<	0.75		
5/4/2004				2.06				0.222		1.72		5		1				4.28	<	0.825	<	0.12	<	0.105		3.06		
5/5/2004				2.67				0.444		1.06		3.61		1.39		0.0101		1.56	<	0.825	<	0.12	<	0.105		18.9		
5/11/2004				3.17			<	0.05		1.44		7.17		0.889				1.72	<	0.825	<	0.121		0.278		1.13		
5/13/2004				3.5			<	0.05		1.11		2.28		0.722			<	0.7	<	0.825	<	0.12	<	0.105		5.89		
5/19/2004				2.55				0.05		1.8		3		0.95				3.2	<	0.825		0.25		0.15		8.65		
5/18/2004				2.55				0.1		1.65		2.4		0.85				3.2	<	0.825		0.2		0.4		6.2		
5/24/2004				4				0.167		2.39		3.33		1.94				3.17		1.94		0.389		0.222		2.72		
5/25/2004				4.67				0.0556		2.72	J	1.28		1.78				4.33		2		0.389	<	0.105		8.72		
6/2/2004							<	0.05			<	0.695				0.00864			<	0.825		0.2						

Attachment 3

RMP Data

RMP Yerba Buena Total Metals Data

Station Co	Station	Date	Ag*	As	Cd*	Co	Cr	Cu*	Fe	Hg	MeHg	Mn*	Ni*	Pb*	Se	Zn*
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ng/L	µg/L	µg/L	µg/L	µg/L	µg/L
BC10	Yerba Buena Island	3/3/1993	0.0037	1.82	0.0333	NA	0.86	2.45	NA	0.004	NA	NA	2.74	0.24	0.132	1.86
BC10	Yerba Buena Island	5/24/1993	0.0516	1.78	0.0685	NA	1.42	1.61	NA	0.0035	NA	NA	1.79	0.24	0.234	1.87
BC10	Yerba Buena Island	9/13/1993	0.0093	2.3	0.0641	NA	0.9	1.66	NA	0.0039	NA	NA	1.46	0.27	0.275	1.76
BC10	Yerba Buena Island	2/3/1994	0.013	2.18	0.0628	NA	1.07	1.68	NA	0.0042	NA	NA	2.13	0.28	0.39	3.26
BC10	Yerba Buena Island	4/20/1994	0.0165	2.02	0.0951	NA	1.78	2.34	NA	0.0064	NA	NA	3.21	0.8	0.27	3.22
BC10	Yerba Buena Island	8/17/1994	0.009	2.46	0.1268	NA	1.17	2.02	NA	0.0029	NA	NA	2.06	0.19	0.27	1.77
BC10	Yerba Buena Island	2/8/1995	0.0026	1.55	0.032	NA	0.85	2.27	NA	0.0025	NA	NA	2.81	0.15	0.07	2.01
BC10	Yerba Buena Island	4/27/1995	0.0033	1.63	0.048	NA	1.64	1.8	NA	0.0034	NA	NA	2.63	0.35	0.18	2.23
BC10	Yerba Buena Island	8/16/1995	0.01	2.02	0.09	NA	0.6	1.33	NA	0.0022	NA	NA	1.43	0.18	e 0.04	1.48
BC10	Yerba Buena Island	2/7/1996	0.004	1.75	0.07	NA	1.2	2.1	NA	0.005	NA	NA	2.3	0.3	0.3	4.4
BC10	Yerba Buena Island	4/30/1996	0.004	1.61	0.05	NA	0.7	1.2	NA	0.002	NA	NA	1.2	0.1	0.11	1.2
BC10	Yerba Buena Island	7/26/1996	0.007	2.13	0.1	NA	4.4	1.8	NA	0.004	NA	NA	2.5	0.3	0.09	2.4
BC10	Yerba Buena Island	1/23/1997	NA	1.47	0.03	NA	3.28	1.8	NA	0.0001	NA	NA	2.4	0.34	0.11	2.4
BC10	Yerba Buena Island	4/14/1997	NA	2.11	0.07	NA	1.41	1.8	NA	0.0038	NA	NA	1.9	0.28	0.11	2.8
BC10	Yerba Buena Island	7/30/1997	NA	2.22	0.1	NA	1.39	1.5	NA	0.0026	NA	NA	2.3	0.25	0.14	1.7
BC10	Yerba Buena Island	1/29/1998	0.01	1.98	0.04	NA	3.05	2.2	NA	0.0055	NA	NA	3.5	0.67	0.15	4.2
BC10	Yerba Buena Island	4/20/1998	0.004	1.52	0.02	NA	2.69	2.1	NA	0.003	NA	NA	2.4	0.35	0.19	2.6
BC10	Yerba Buena Island	7/22/1998	0.004	1.92	0.07	NA	0.71	1.3	NA	0.0023	NA	NA	1.6	0.16	0.12	2
BC10	Yerba Buena Island	2/4/1999	0.005	1.68	0.038	NA	0.65	1.8	NA	b 0.0035	NA	NA	2.3	0.29	0.11	2.3
BC10	Yerba Buena Island	4/14/1999	0.006	1.11	0.068	NA	2.09	1.6	NA	b 0.0068	q 0.06	NA	2.2	0.35	e 0.02	2.5
BC10	Yerba Buena Island	7/16/1999	0.012	2.14	0.126	NA	3.33	2.3	NA	b 0.007	q b 0.04	NA	3.7	0.63	0.11	3.9
BC10	Yerba Buena Island	2/4/2000	0.011	1.39	0.091	NA	NA	2.01	NA	b 0.0069	p 0.025	NA	3.014	0.74823	ND	2.996
BC10	Yerba Buena Island	7/14/2000	0.007	1.71	0.086	NA	NA	0.815	NA	Q	ND, p	NA	1.086	0.23813	e 0.039	1.266
BC10	Yerba Buena Island	2/8/2001	NA	2.16	NA	NA	NA	NA	NA	NR	B	NA	NA	NA	e 0.08	NA
BC10	Yerba Buena Island	8/3/2001	NA	b 2.08	NA	NA	NA	NA	NA	0.0086	0.197	NA	NA	NA	e 0.08	NA
	Maximum		**0.0516**	**2.46**	**0.1268**	**0**	**4.4**	**2.45**	**0**	**0.0086**	**0.197**	**0**	**3.7**	**0.8**	**0.39**	**4.4**
	Average		**0.00965**	**1.86083**	**0.06868**	**#DIV/0!**	**1.67571**	**1.8037**	**#DIV/0!**	**0.00368**	**0.197**	**#DIV/0!**	**2.28957**	**0.33506**	**0.17689**	**2.44009**

RMP Yerba Buena Total PAHs

Station Code	Station	Date	2-Methylphenanthrene	Methylanthracene	Total Alkanes	SUM PAHS (SFEI)	SUM LPAHS (SFEI)	Biphenyl	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	2,6-Dimethylnaphthalene	2,3,5-Trimethylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene
			ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
BC10	Yerba Buena Island	3/3/93	0.627			11	3.27	NA	NA	NA	NA	NA	NA	NA	NA	0.01
BC10	Yerba Buena Island	2/3/94		ND	2983	13	2.11	NA	NA	0.26	0.41	NA	NA	NA	NA	0.02
BC10	Yerba Buena Island	4/20/94		NA	793	29	2.74	NA	NA	0.27	NA	NA	NA	NA	NA	0.17
BC10	Yerba Buena Island	8/17/94		NA	136	10	1.2	NA	NA	NA	NA	NA	NA	NA	NA	0.08
BC10	Yerba Buena Island	2/8/95			208	9	1.56	NA	NA	NA	NA	NA	NA	NA	NA	ND
BC10	Yerba Buena Island	4/27/95			96	14	1.97	NA	NA	NA	NA	NA	NA	NA	NA	Q
BC10	Yerba Buena Island	8/16/95			105	14	2.97	NA	NA	NA	NA	NA	NA	NA	NA	Q
BC10	Yerba Buena Island	2/7/96				37	17.08	1.4	2.3	0.88	2.56	0.26	0.24	0.69	0.53	0.09
BC10	Yerba Buena Island	4/30/96				25	12.14	0.6	1.1	1.24	Q	0.39	0.19	1.3	0.22	ND
BC10	Yerba Buena Island	7/26/96				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BC10	Yerba Buena Island	1/23/97				26	11.93	0.3	0.4	0.56	0.87	ND	ND	0.97	ND	ND
BC10	Yerba Buena Island	4/14/97				24	4.67	0.2	0.2	0.19	0.32	ND	ND	0.77	ND	ND
BC10	Yerba Buena Island	7/30/97				24	7.27	0.2	0.4	0.18	0.21	0.13	0.12	1.5	0.17	0.44
BC10	Yerba Buena Island	1/29/98				52	10.3	ND	ND	ND	ND	ND	ND	1.4	0.3	0.5
BC10	Yerba Buena Island	4/20/98				S	S	b 0.43	ND	ND	ND	B	B	B	ND	B
BC10	Yerba Buena Island	7/22/98				S	S	ND	ND	ND	0.44	ND	ND	1.4	ND	ND
BC10	Yerba Buena Island	2/4/99				17	0.8	ND	ND	ND	0.23	ND	ND	0.13	ND	ND
BC10	Yerba Buena Island	4/14/99				20	4.7	0.2	0.29	ND	0.44	ND	ND	0.24	ND	ND
BC10	Yerba Buena Island	7/16/99				34	6.8	B	0.24	0.4	B	0.47	ND	0.88	0.11	0.35
BC10	Yerba Buena Island	7/14/00				13.28	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
BC10	Yerba Buena Island	8/3/01				19	4.4	1.2	ND	ND	ND	ND	ND	ND	ND	ND
	Maximum		**0.627**	**0**	**2983**	**52**	**17.08**	**1.4**	**2.3**	**1.24**	**2.56**	**0.47**	**0.24**	**1.5**	**0.53**	**0.5**
	Average		**0.6270**	**0.0000**	**1043.4286**	**23.3305**	**6.0416**	**0.6875**	**0.9038**	**0.5800**	**0.8933**	**0.3440**	**0.1975**	**0.9800**	**0.3100**	**0.2400**

RMP Yerba Buena Total PAHs

Date	Dibenzothiophene	Fluorene	Phenanthrene	1-Methylphenanthrene	SUM HPAHS (SFEI)	Benz(a)anthracene	Chrysene	Pyrene	Benzo(a)pyrene	Benzo(e)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Dibenz(a,h)anthracene	Perylene	Benzo(ghi)perylene	Fluoranthene	Indeno(1,2,3-cd)pyrene
	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
3/3/93	NA	NA	2.86	0.41	8	0.09	0.59	0.84	0.02	0.65	1.09	0.33	0.04	NA	ND	4.03	0.21
2/3/94	NA	NA	1.42	NA	11	0.33	0.98	1.6	0.04	0.89	1.41	0.59	0.03	NA	ND	4.91	0.52
4/20/94	NA	NA	2.3	NA	26	1.18	e 1.41	5.1	e 0.02	e 2.65	e 3.96	e 1.22	0.35	NA	NA	6.6	e 3.31
8/17/94	NA	NA	1.12	ND	9	NA	0.42	1.6	ND	0.64	1	0.31	0.25	NA	0.1	3.8	0.7
2/8/95	NA	NA	1.43	0.13	7	0.06	0.67	1.76	ND	0.66	0.97	0.47	0.1	NA	NA	2.52	0.22
4/27/95	NA	NA	1.97	Q	12	Q	1.14	1.1	Q	1.6	2.2	0.62	0.39	NA	NA	2.7	2
8/16/95	NA	NA	2.27	0.7	11	0.39	1.07	1.03	0.29	1.02	1.13	0.78	0.4	NA	NA	3.93	0.65
2/7/96	0.22	1.75	5.1	1.12	20	1.12	1.48	4.1	0.04	2.5	1.86	1.48	0.64	ND	ND	4.7	2.5
4/30/96	0.09	2.08	4.65	0.28	12	0.79	0.72	1.3	ND	0.97	1.44	0.52	0.14	ND	ND	6	0.6
7/26/96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/23/97	ND	1.85	6	0.95	14	1.14	0.45	4	ND	0.81	0.96	0.35	ND	ND	ND	6.71	ND
4/14/97	0.15	0.65	2.25	ND	19	1.9	0.99	3.29	ND	1.8	2.4	0.81	0.25	ND	2.7	2.8	2.4
7/30/97	0.2	1.1	2.39	0.23	17	1.34	0.79	3.9	ND	0.96	1.4	0.44	0.12	ND	ND	7	0.68
1/29/98	0.3	1.8	6.1	B	41	5.3	2.4	b 8.3	ND	3.2	4.6	1.5	0.6	ND	0.38	11	4
4/20/98	ND	B	CE	b 6.6	26	CE	0.65	b 19	ND	1.2	2.1	0.57	ND	ND	0.93	B	1.6
7/22/98	ND	1.4	CE	ND	9	CE	0.41	B	ND	0.48	0.8	ND	ND	ND	ND	b 7.8	ND
2/4/99	ND	0.24	NA	0.2	16	2.6	1.1	3.4	ND	1.4	1.8	0.7	0.2	ND	0.2	3.9	0.9
4/14/99	ND	0.6	2.5	0.5	15	0.2	1.1	3.4	ND	1.8	2.7	0.9	0.2	ND	ND	3.4	1.6
7/16/99	0.37	1.1	b 2.8	B	27	1.7	1.8	b 5.3	ND	2.9	4.2	1.4	0.4	ND	ND	6.3	3.1
7/14/00	ND	0.38	1.42	ND	11.48	1.3	0.67	2.18	ND	1.2	1.9	0.57	ND	ND	ND	3	0.66
8/3/01	ND	0.62	2.6	ND	14	1.8	0.81	2.9	ND	1.3	2.1	0.62	ND	ND	ND	3.5	1.4
	0.37	**2.08**	**6.1**	**1.12**	**41**	**5.3**	**2.4**	**5.1**	**0.29**	**3.2**	**4.6**	**1.5**	**0.64**	**0**	**2.7**	**11**	**4**
	0.2429	**1.2038**	**3.0871**	**0.5640**	**17.4514**	**1.5612**	**1.0320**	**2.7412**	**0.1360**	**1.4590**	**2.0330**	**0.7611**	**0.2969**	**0.0000**	**1.1683**	**5.1474**	**1.5411**

RMP Yerba Buena Total Pesticides

Station Code	Station	Date	Methylchlorpyrifos	p,p^-DDMU	Toxaphene	Trifluralin	Chlorpyrifos	Dacthal	Diazinon	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Oxadiazon	SUM DDTs (SFEI)	o,p^-DDD	o,p^-DDE	o,p^-DDT	p,p^-DDD
			pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
BC10	Yerba Buena Island	3/3/1993					1210	1161	NA	23.268	Q	Q	1317	196	18	ND	T	100
BC10	Yerba Buena Island	2/3/1994	ND	35.8	ND	ND	2185	1515	NA	ND	ND	ND	3244	222	21.1	e 2.4	ND	121.5
BC10	Yerba Buena Island	4/20/1994	NA	NA	NA	NA	142	178	2800	ND	ND	ND	3	354	32	4.8	ND	229
BC10	Yerba Buena Island	8/17/1994	NA	NA	NA	NA	206	80	540	ND	ND	ND	180	142	9.5	1.7	ND	88
BC10	Yerba Buena Island	2/8/1995					134	661	8100	ND	ND	ND	132	106	2	4	ND	12
BC10	Yerba Buena Island	4/27/1995					137	294	2400	ND	ND	ND	ND	376	38	5	4	170
BC10	Yerba Buena Island	8/16/1995					4	39	460	ND	ND	ND	9	151	16	4	2	68
BC10	Yerba Buena Island	2/7/1996					ND	165	13000	ND	ND	ND	2	341	27	6	Q	126
BC10	Yerba Buena Island	4/30/1996					151	172	1700	31	69	11	50	249	33	16	Q	95
BC10	Yerba Buena Island	7/26/1996					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BC10	Yerba Buena Island	1/23/1997					194	11	4522	ND	ND	81.9	13	546	20	17	M	313
BC10	Yerba Buena Island	4/14/1997					66	79	1300	ND	ND	26	ND	439	64	7	M	197
BC10	Yerba Buena Island	7/30/1997					231	ND	640	ND	ND	ND	ND	260	15	17	M	144
BC10	Yerba Buena Island	1/29/1998					B	b 280	3455	ND	ND	39.7	b 2017	S	52	T	T	B
BC10	Yerba Buena Island	4/20/1998					B	ND	M	ND	ND	11.5	ND	S	b 23	B	Q	B
BC10	Yerba Buena Island	7/22/1998					B	b 54	400	ND	ND	21	175	S	B	B	B	B
BC10	Yerba Buena Island	2/4/1999					B	152	5200	20	19	41	491	221	34	b 8.4	Q	84
BC10	Yerba Buena Island	4/14/1999					b 80	3	1500	ND	39	28	4002	182	b 25	5.1	Q	50
BC10	Yerba Buena Island	7/16/1999					4	7	3040	2	ND	39	ND	150	13	3.5	Q	58
BC10	Yerba Buena Island	7/14/2000					22	10	370	3.6	ND	12	49	164	21	13	3.3	83
BC10	Yerba Buena Island	8/3/2001					44	8.6	ND	ND	ND	7	196	161	Q	Q	Q	62
	Maximum			**35.8**			**2185**	**1515**	**13000**	**31**	**69**	**81.9**	**4002**	**546**	**64**	**17**	**4**	**313**
	Average			**35.8**			**337.857143**	**283.475**	**3089.188**	**15.9736**	**42.3333333**	**28.9181818**	**704.5**	**250.588235**	**25.975**	**8.007692**	**3.1**	**117.6765**

RMP Yerba Buena Total Pesticides

Date	p,p^-DDE	p,p^-DDT	SUM Chlordanes (SFEI)	alpha-Chlordane	gamma-Chlordane	cis-Nonachlor	trans-Nonachlor	Heptachlor	Heptachlor Epoxide	Oxychlordane	Sum HCHs (SFEI)	alpha-HCH	beta-HCH	delta-HCH	gamma-HCH	Aldrin	Dieldrin	Endrin	Hexachlorobenzene	Mirex
	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
3/3/1993	50	28	75	25	24	Q	25	NA	NA	NA	348	148	93	NA	107	NA	264	NA	16	NA
2/3/1994	51.8	e 24.9	84	36	20.2	10.5	17.4	NA	ND	ND	1284	424	157	NA	703.4	NA	171.1	NA	ND	NA
4/20/1994	88	ND	103	33	28	12.2	21.3	ND	9.3	ND	1197.7	389	413	ND	396	NA	93	CE	8.8	ND
8/17/1994	43	ND	101	28	32.3	8.3	12.9	19	ND	ND	847.4	295	349	ND	203.6	NA	16	ND	8.9	ND
2/8/1995	88	ND	165	18	24	5	22	ND	94	2	540	190	86	34	230	NA	ND	9	16	ND
4/27/1995	151	8	110	25	27	14	24	ND	16	4	771	373	155	7	237	NA	ND	ND	4	ND
8/16/1995	32	29	65	17	14	5	12	2	11	3	640	312	160	6	162	NA	53	2	2	ND
2/7/1996	127	55	180	46	27	10	29	2	63	4	835	346	171	7	310	NA	64	ND	12	ND
4/30/1996	74	32	119	29	25	CE	13	8	38	6	1095	496	322	7	270	NA	4	16	5	ND
7/26/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/23/1997	133	63	155	35	27	4	14	ND	16	60	408	190	71	7	140	NA	184	ND	13.2	ND
4/14/1997	105	66	144	27	14	8	21	ND	32	43	501	250	111	ND	140	NA	78	ND	20.2	ND
7/30/1997	84	ND	161	30	20	6	29	ND	34	41	484	223	130	ND	131	NA	75	ND	8.6	ND
1/29/1998	T	b 167	116.4	b 51	36	5.4	T	ND	24	ND	385	114	131	ND	140	NA	110	ND	T	T
4/20/1998	693	B	S	b 39	B	b 4.2	25	ND	B	ND	S	B	B	b 53	B	NA	ND	B	bi 2.2	ND
7/22/1998	b 73	7	S	B	B	B	B	B	B	2.1	553	b 250	150	B	153	NA	39	B	bi 8.5	ND
2/4/1999	82	13	49	13	15	B	13	ND	6.3	2.2	388	124	82	6.9	175	NA	55	14	B	ND
4/14/1999	76	26	46	13	13	Q	10	ND	10	ND	220	81	80	6.5	53	NA	28	ND	14	ND
7/16/1999	74	1.6	38	5	7	2.9	6.8	13	2.8	ND	323	160	99	3.5	60	NA	24	1.6	10	ND
7/14/2000	44	B	48	7.3	2.4	2.7	15	3.3	8.8	8.6	155	85	28	42	ND	NA	22	36	B	ND
8/3/2001	69	b 31	53	4.6	4.9	2.4	5.9	ND	25	b 10	215	145	16	ND	54	NA	19	ND	b 22	ND
	693	**66**	**180**	**46**	**36**	**14**	**29**	**19**	**94**	**60**	**1284**	**496**	**413**	**42**	**703.4**		**264**	**36**	**20.2**	
	114.7111	**29.87273**	**100.688889**	**23.052941**	**20.044444**	**6.8857143**	**17.572222**	**7.88333333**	**26.0133333**	**15.990909**	**588.952632**	**241.388889**	**147.57895**	**12.69**	**203.611**		**76.4176**	**13.1**	**10.6692308**	

Attachment 4

Calculation of Final WQBELs

Mirant Potrero Power Plant
NPDES Permit Reissuance

~~Effluent Limitation Calculations (Per Section 1.4 of the SIP)~~

PRIORITY POLLUTANTS	Copper	Mercury
Units	**ug/L**	**ug/L**
Basis and Criteria type	CTR, SW	BP, SW
Lowest WQO	3.7	0.025
Translators		
Dilution Factor (D) (if applicable)	0	0
no. of samples per month	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y
HH criteria analysis required? (Y/N)	N	Y
Applicable Acute WQO	5.8	2.1
Applicable Chronic WQO	3.7	0.025
HH criteria		0.051
Background (max conc for Aquatic Life calc)	2.46	0.0086
Background (avg conc for HH calc)		0.0037
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	Y
ECA acute	5.8	2.1
ECA chronic	3.7	0.025
ECA HH		0.051
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N
avg of data points	3.215	0.0096
SD	1.72	0.0122
CV calculated	0.535	1.268
CV (Selected) - Final	0.535	1.268
ECA acute mult99	0.35	0.17
ECA chronic mult99	0.56	0.31
LTA acute	2.05	0.35
LTA chronic	2.08	0.01
minimum of LTAs	2.05	0.01
AMEL mult95	1.49	2.20
MDEL mult99	2.83	6.04
AMEL (aq life)	3.05	0.02
MDEL(aq life)	5.80	0.05
MDEL/AMEL Multiplier	1.90	2.75
AMEL (human hlth)		0.051
MDEL (human hlth)		0.140
minimum of AMEL for Aq. life vs HH	3.05	0.017
minimum of MDEL for Aq. Life vs HH	5.80	0.046
Current limit in permit (30-d avg)	N/A	N/A
Current limits in permit (daily)	N/A	N/A
Final limit - Calculated AMEL	3.0	0.017
Final limit - Calculated MDEL	5.8	0.046
Max Effl Conc (MEC)	7.17	0.0505
Feasible for immediate compliance?	**No**	**No**
Interim Limits for those where TMDL is final limit	10.3	0.056

Attachment 5

General Basis for Final Compliance Dates

General Basis for Final Compliance Dates [1]
for Discharges North of the Dumbarton Bridge

Constituent	Reference for applicable standard	Maximum compliance schedule allowed	Compliance date and Basis
Cyanide Selenium	NTR	10 years	**April 28, 2010** (10 years from effective date of SIP). Basis is the SIP.
Copper (salt)	CTR	5 years	**May 18, 2010** (this is 10 years from effective date of CTR/SIP). Bases are CTR and SIP.
Mercury PAH EPA 610	Numeric Basin Plan (BP)	10 years	**April 28, 2010,** which is 10 years from effective date of SIP (April 28, 2000). Basis is the Basin Plan, See note [2a].
Arsenic Cadmium Chromium (VI) Copper (fresh) Lead Nickel Silver (CMC) Zinc	Numeric BP	10 years	**January 1, 2015.** This is 10 years (using full months) from effective date of 2004 BP amendment (January 5, 2005). Basis is the Basin Plan section 4.3.5.6. See note [2b]. Also, see note [3] for permits issued prior to effective date of 2004 BP amendment.
Dioxins/Furans Tributyltin Other toxic pollutants not in CTR	Narrative BP using SIP methodology	10 years	**10-yr from effective date of permit** (which is when new standard is adopted; no sunset date). Basis is the Basin Plan, see note [2c].
Other priority pollutants on CTR and not listed above	CTR	5 years	**May 18, 2010** (this is 10 years from effective date of CTR/SIP). Basis is the CTR and SIP.

Revised February 1, 2006

[1] These dates are maximum allowable compliance dates applicable. As required by the Basin Plan, CTR, SIP, and 40CFR122.47, compliance should be as short as possible. These are only applicable for discharges north of the Dumbarton Bridge because applicable criteria for the south bay are different than those cited above.

- For pollutants where there are planned TMDLs or SSOs, and final WQBELs may be affected by those TMDLs and SSOs, maximum timeframes may be appropriate due the uncertain length of time it takes to develop the TMDL/SSO.
- However, for pollutants without planned TMDLs or SSOs, the State Board in the EBMUD remand order (WQO 2002-0012), directs the Regional Board to establish schedules that are as short as feasible in accordance with requirements.

[2] The Basin Plan provides for a 10-year compliance schedule for implementation of measures to comply with new standards as of the effective date of those standards. This provision has been construed to authorize compliance schedules for new interpretations of existing standards, such as the numeric and narrative water quality objectives specified in the Basin Plan, if the new interpretations result in more stringent limits than in the previous permit.

a. For the numeric objectives in place since the 1995 Basin Plan, due to the adoption of the SIP, the Water Board has newly interpreted these objectives. The effective date of this new interpretation is the effective date of the SIP (April 28, 2000) for implementation of these numeric Basin Plan objectives.

b. For numeric objectives for the seven pollutants adopted in the 2004 Basin Plan (amendments), the Water Board has newly adopted these objectives. The effective date of these new objectives is the approval date of the 2004 Basin Plan by U.S. EPA (January 5, 2005) for implementation of these numeric Basin Plan objectives. December is the last full month directly preceding the sunset date. Compliance should be set on the first day of the month to ease determination of monthly average limits. Therefore, compliance must begin on January 1, 2015.

c. For narrative objectives, the Board must newly interpreted these objectives using best professional judgment as defined in the Basin Plan for each permit. Therefore, the effective date of this new interpretation will be the effective date of the permit.

[3] The schedules established in permits effective prior to the 2004 Basin Plan (amendments) should be continued into subsequent permits reissued after the 2004 Basin Plan. For example, Permit XX, adopted Nov 2004 became effective Feb 1, 2005. Permit XX establishes a compliance schedule for copper to end April 1, 2010. When next reissued in 2010, the compliance deadline for the same copper limit should remain April 1, 2010. However, if in applying the 2004 BP objective results in a more stringent limit for copper, then a new compliance schedule may extend to the new date in 2015, provided discharger XX justifies the need for the longer compliance schedule.